

REMARKS

After entry of this Amendment, the pending claims are: claims 1-17, 20-31, 34-38 and 43-45. The Office Action dated February 11, 2009 has been carefully considered. Claims 18, 19, 32, 33 and 39-42 were previously canceled. Claims 1, 25, 29, 30 and 43 have been amended. Claims 3-5, 10, 20-24 and 34-38 were previously withdrawn as being drawn to a non-elected species based on the understanding that the claims would only be restricted to the elected species if no generic claim is held allowable. Claims 29 and 30 have been amended to correct minor informalities. Support for the amendments to claims 1, 25 and 43 can be found throughout the Specification and Drawings and specifically in paragraphs Nos. 39, 40, 55 and 57, and Fig. 2. Accordingly, no new matter has been added to the application as a result of the above-described amendments. Applicants respectfully request reconsideration and allowance of the pending claims in view of the above Amendments and the following remarks.

In the Office Action dated February 11, 2009, the Examiner:

- objected to claims 29 and 30 for containing minor informalities;
- rejected claims 1, 2, 8, 9, 11, 12, 25, 26, 43 and 45 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,649,931 to Bryant *et al.* ("Bryant");
- rejected claims 6 and 27 under 35 U.S.C. 103(a) as being unpatentable over Bryant;
- rejected claim 7 under 35 U.S.C. 103(a) as being unpatentable over Bryant in view of U.S. Patent Application Publication No. 2003/0036758 to Frigg *et al.* ("Frigg");
- rejected claim 13 under 35 U.S.C. 103(a) as being unpatentable over Bryant in view of by U.S. Patent No. 5,431,660 to Burke *et al.* ("Burke"); and

- rejected claims 14-17, 28-31 and 44 under 35 U.S.C. 103(a) as being unpatentable over Bryant in view of U.S. Patent Application Publication No. 2002/0151899 to Bailey *et al.* ("Bailey").

DEPENDENT CLAIMS 29 AND 30

The examiner objected to claims 29 and 30 for containing minor informalities. Per the Examiner's suggestions, claims 29 and 30 have been amended to recite "locking clip expanding portion." Accordingly, claims 29 and 30 have been amended to correct the objection to minor informalities. Withdrawal of these objections is respectfully requested.

INDEPENDENT CLAIM 1

Independent claim 1 and claims 2, 8, 9, 11 and 12, which depend therefrom, were rejected as being anticipated by Bryant. Dependent claim 6 was rejected as being unpatentable over Bryant. Dependent claim 7 was rejected as being unpatentable over Bryant in view of Frigg. Dependent claim 13 was rejected as being unpatentable over Bryant in view of Burke. Dependent claims 14-17 were rejected as being unpatentable over Bryant in view of Bailey. Applicants respectfully traverse these rejections, as amended.

Referring to Figs. 4 and 5, Bryant discloses an orthopedic apparatus 10 including a body 14 having a pair of collet fingers 30 disposed on a distal end thereof for receiving a head of a bone screw 12, a shaft 16 slidably disposed within the body 14, the shaft 16 having a distal end 34 for engaging a recess 24 formed in the head of the bone screw 12, and an outer sleeve 18 disposed about and threadably coupled to the body 14. In use, rotation of the outer sleeve 18 causes the sleeve 18 to move with respect to the shaft 16, which in turn causes the collet fingers 30 to compress about the head of the bone screw 12.

Applicants respectfully submit that Bryant does not disclose each and every limitation of independent claim 1 as amended. Amended claim 1 is directed to a bone fastener implantation and removal system and recites as follows:

a bone plate including a top surface, a bottom surface and a plurality of fastener holes extending from the top surface to the bottom surface; a plurality of fasteners receivable within the fastener holes formed in the bone plate; and a tool including: a drive shaft having proximal and distal ends, an intermediate portion, an outer sleeve engaging portion and a length; a handle portion associated with the drive shaft proximal end; a fastener engaging portion associated with the drive shaft distal end, the fastener engaging portion comprising a first surface configured to axially engage one of the plurality of fasteners and a second surface configured to rotationally engage the fastener; and an outer sleeve associated with the drive shaft intermediate portion, the sleeve comprising a proximal end, a distal end and a drive shaft engaging portion, **the distal end contacting the top surface of the bone plate to apply a force to the top surface of the bone plate to facilitate removal of the fasteners from the fastener holes**; wherein the outer sleeve engaging portion and the drive shaft engaging portion are configured to coact to allow at least a portion of the drive shaft to translate linearly within the sleeve. (Emphasis Added).

Applicants respectfully submit that there is no disclosure, teaching, or suggestion in Bryant of an a bone fastener implantation and removal system comprising a bone plate, a plurality of fasteners, and a tool which includes a first surface configured to axially engage one of the plurality of fasteners, a second surface configured to rotationally engage the fastener and *an outer sleeve having a distal end for contacting a top surface of the bone plate to apply a force to the bone plate to facilitate removal of the fastener from a fastener hole. Rather, as outlined in our discussion during the Examiner interview, Bryant discloses an orthopedic apparatus 10 having an outer sleeve 18 that is longitudinally moveable with regard to the shaft 16 to bias the collet fingers 30 to radially inwards around the head of the bone screw 12.*

As best shown in Figs. 4 and 5, the outer sleeve 18 in Bryant is not configured to contact the top surface of a bone plate and cannot apply a force to the top surface of the bone plate to facilitate removal of a bone screw 12 from a fastener hole. Accordingly, Bryant does not disclose, teach or suggest an

outer sleeve comprising a distal end for contacting the top surface of the bone plate to apply a force to the bone plate to facilitate removal of a fastener from a fastener hole.

Therefore, it is respectfully submitted that Bryant does not disclose, teach, or suggest all of the limitations of independent claim 1. Withdrawal of this rejection and allowance of independent claim 1 is respectfully requested.

Furthermore, as claims 2, 6-9 and 11-17 all depend from independent claim 1, it is submitted that these claims are equally allowable. Withdrawal of these rejections and allowance of claims 2, 6-9 and 11-17 is respectfully requested.

With respect to claim 7, which was rejected under 35 U.S.C. 103(a) as being unpatentable over Bryant in view of Frigg, it is respectfully submitted that Frigg does not overcome the short comings of Bryant. Frigg was cited for the proposition that it would be obvious for one skilled in the art to incorporate a threaded axial fastener-engagement portion. Without addressing the merits of this argument and/or the combination, it is respectfully submitted that, for at least the above-identified reason, neither Frigg nor Bryant, either alone or in combination, disclose, teach or suggest all of the limitations of dependent claim 7, specifically the features of independent claim 1. Thus, it is respectfully submitted that dependent claim 7 is allowable over the cited prior art. Withdrawal of this rejection and allowance of dependent claim 7 is respectfully submitted.

With respect to claim 13 which was rejected under 35 U.S.C. 103(a) as being unpatentable over Bryant in view of Burke, it is respectfully submitted that Burke does not overcome the short comings of Bryant. Burke was cited for the proposition that it would be obvious to incorporate a roughened outer surface on at least a portion of the outer sleeve. Without addressing the merits of this argument and/or the combination, it is respectfully submitted that, for at least the above-identified reason, neither Burke

nor Bryant, either alone or in combination, disclose, teach or suggest all of the limitations of dependent claim 13, specifically the limitations of independent claim 1. Thus, it is respectfully submitted that dependent claim 13 is allowable over the cited prior art. Withdrawal of this rejection and allowance of dependent claim 13 is respectfully submitted.

With respect to claims 14-17 which were rejected under 35 U.S.C. 103(a) as being unpatentable over Bryant in view of Bailey, it is respectfully submitted that Bailey does not overcome the short comings of Bryant. Bailey was cited for the proposition that it would be obvious to incorporate a locking clip expanding portion configured to expand a locking clip which engages a portion of a fastener. Without addressing the merits of this argument and/or the combination, it is respectfully submitted that, for at least the above-identified reason, neither Bailey nor Bryant, either alone or in combination, disclose, teach or suggest all of the limitations of dependent claims 14-17, specifically the limitations of independent claim 1. Thus, it is respectfully submitted that dependent claims 14-17 is allowable over the cited prior art. Withdrawal of this rejection and allowance of dependent claims 14-17 is respectfully submitted.

Moreover, claims 3-5, 10 and 20-24 were withdrawn as being directed to a non-elected species based on the understanding that the claims would only be restricted to the elected species if no generic claim is held allowable. It is respectfully submitted that independent claim 1 is generic and, as such, claims 3-5, 10 and 20-24 should be allowed as well.

INDEPENDENT CLAIMS 25 AND 43

Independent claim 25 and claim 26, which is dependent therefrom, was rejected as being anticipated by Bryant. Similarly, independent claim 43 and claim 45, which is dependent therefrom, was rejected as being anticipated by Bryant. Dependent claim 27 was rejected as being unpatentable

over Bryant. Dependent claims 28-31 and 44 were rejected as being unpatentable over Bryant in view of Bailey. Applicants respectfully traverse these rejections, as amended.

Amended claim 25 is directed to a bone fastener implantation and removal system and recites *inter alia* as follows:

a bone plate ... a plurality of fasteners ... and a tool including a drive shaft having ... a rotational engagement portion and an axial engagement portion; a sleeve disposed about at least a portion of the drive shaft, the sleeve comprising ... **a distal end ... contacting the top surface of the bone plate to apply a force to the top surface of the bone plate to facilitate removal of one of the plurality of fasteners from the fastener holes....** (Emphasis Added).

Amended independent claim 43 is directed to a bone fastener implantation and removal system and recites as follows:

a bone plate ... a plurality of bone fasteners ... and a tool including an inner shaft for engaging one of the bone fasteners, an outer shaft for engaging the bone fastener, and **an outer sleeve for contacting the top surface of the bone plate and applying a force to the top surface of the bone plate to facilitate removal of one of the plurality of fasteners from the fastener holes....** (Emphasis Added).

For reasons similar to those described above in connection with independent claim 1, it is respectfully submitted that *Bryant does not disclose, teach or suggest an outer sleeve comprising a distal end for contacting the top surface of a bone plate to apply a force to the top surface of the bone plate to facilitate removal of a fastener from a fastener hole. Rather, at best, Bryant discloses an orthopedic apparatus 10 having an outer sleeve 18 that is longitudinally moveable with regard to the shaft 16 to bias the collet fingers 30 radially inwards around the head of the bone screw 12.*

Therefore, for at least the reason identified above, it is respectfully submitted that Bryant does not disclose, teach, or suggest all of the limitations of independent claims 25 and 43. Withdrawal of this rejection and allowance of independent claims 25 and 43 is respectfully requested.

Furthermore, as claims 26-31 all depend from independent claim 25, and claims 44 and 45 all depend from independent claim 43, it is submitted that these claims are equally allowable. Withdrawal of these rejections and allowance of claims 26-31, 44 and 45 is also respectfully requested.

With respect to claims 28-31 and 44 which were rejected under 35 U.S.C. 103(a) as being unpatentable over Bryant in view of Bailey, it is respectfully submitted that Bailey does not overcome the short comings of Bryant. Bailey was cited for the proposition that it would be obvious to incorporate a locking clip expanding portion configured to expand a locking clip which engages a portion of a fastener. Without addressing the merits of this argument and/or the combination, it is respectfully submitted that, for at least the above-identified reason, neither Bailey nor Bryant, either alone or in combination, disclose, teach or suggest all of the limitations of dependent claims 28-31 and 44, specifically the limitations of independent claims 25 and 43. Thus, it is respectfully submitted that dependent claims 28-31 and 44 are allowable over the cited prior art. Withdrawal of this rejection and allowance of dependent claims 28-44 is respectfully submitted.

Moreover, claims 34-38 were withdrawn as being directed to a non-elected species based on the understanding that the claims would only be restricted to the elected species if no generic claim is held allowable. It is respectfully submitted that independent claim 25 is generic and, as such, claims 34-38 should be allowed as well.

CONCLUSION

Based upon the above-listed amendments and remarks, Applicants respectfully submit that the present application, including claims 1-17, 20-31, 34-38 and 43-45, is in condition for allowance and such action is respectfully requested.

No fee is believed due for this submission. If, however, the Commissioner determines otherwise, the Commissioner is authorized to charge any fees which may now or hereafter be due in this application to Deposit Account No. 19-4709.

In the event that there are any questions, or should additional information be required, please contact Applicant's attorney at the number listed below.

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